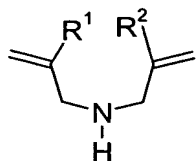


We claim:

1. A process for the preparation of polymers, which comprises reacting N,N-diallylamine derivatives of the general formula I

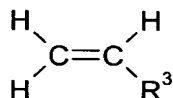


I

where

$\text{R}^1, \text{R}^2$ , independently of one another, are hydrogen or  $\text{C}_1$ - $\text{C}_4$ -alkyl,

in the sense of a Michael addition with compounds of the general formula II



II

where

$\text{R}^3$  is  $\text{COOR}^4$ ,  $\text{CN}$ ,  $\text{CHO}$ ,  $\text{SO}_3\text{H}$ ,  $\text{PO}(\text{OH})_2$  or  $\text{CONR}^5\text{R}^6$ ,

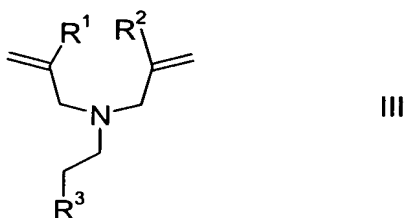
$\text{R}^4, \text{R}^5, \text{R}^6$ , independently of one another, are hydrogen or  $\text{C}_1$  to  $\text{C}_{18}$ -alkyl,

and then free-radically polymerizing the Michael adducts, if appropriate in the presence of one or more free-radically copolymerizable monomers.

2. A process according to claim 1, where  $\text{R}^1$  and  $\text{R}^2$  are hydrogen.
3. A process according to claim 1 or 2, where  $\text{R}^3$  is  $\text{COOH}$ .
4. A process according to claims 1 to 3, wherein the polymerization is carried out in the presence of one or more monomers chosen from the group consisting of acrylic acid, methacrylic acid, maleic acid, fumaric acid, crotonic acid, itaconic acid, maleic anhydride and maleic half-esters, methyl acrylate, methyl methacrylate, ethyl acrylate, ethyl methacrylate, n-butyl acrylate, n-butyl methacrylate, t-butyl acrylate, t-butyl methacrylate, isobutyl acrylate, isobutyl methacrylate, 2-ethylhexyl acrylate, stearyl acrylate, stearyl methacrylate, acrylamide, N-t-butylacrylamide, N-octylacrylamide, 2-hydroxyethyl acrylate, hydroxypropyl acrylates, 2-hydroxyethyl methacrylate, hydroxypropyl methacrylates, alkylene glycol (meth)acrylates, styrene, unsaturated sulfonic acids, such as, for example, acrylamidopropanesulfonic acid, vinylpyrrolidone, vinylcaprolactam, vinyl ethers (e.g.: methyl, ethyl, butyl or dodecyl vinyl ethers), vinylformamide, vinylmethacetamide, vinylamine, 1-vinylimidazole, 1-vinyl-2-methylimidazole, N,N-dimethylaminomethyl methacrylate and N-[3-(dimethylamino)propyl]methacrylamide, 3-methyl-1-vinylimidazolium chloride,

3-methyl-1-vinylimidazolium methylsulfate, N,N-dimethylaminoethyl methacrylate, N-[3-(dimethylamino)propyl]methacrylamide quaternized with methyl chloride, methyl sulfate or diethyl sulfate.

- 5 5. A process according to claims 1 to 4, wherein the polymerization takes place in the presence of an acid chosen from the group consisting of hydrochloric acid, sulfuric acid, phosphoric acid and nitric acid.
- 10 6. A process according to claims 1 to 5, wherein the reaction temperature is between 30 and 90°C.
7. A process according to claims 1 to 6, wherein the reaction temperature is between 40 and 70°C.
- 15 8. Polymers obtainable by a process according to claims 1 to 7.
9. N,N-Diallylamine derivatives of the general formula III

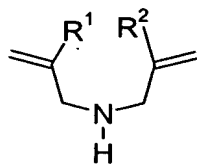


in which

- 20  $R^1, R^2$ , independently of one another, are hydrogen or  $C_1$  to  $C_4$ -alkyl,  
 $R^3$  is  $COOR^4$ , CN, CHO,  $SO_3H$ ,  $PO(OH)_2$  or  $CONR^5R^6$ , and  
 $R^4, R^5, R^6$ , independently of one another, are hydrogen or  $C_1$  to  $C_{18}$ -alkyl,  
 where a quaternization of the nitrogen as a result of protonation may also be present.

- 25 10. N,N-Diallylamine derivatives according to claim 9, where  $R^1$  and  $R^2$  are hydrogen.
11. N,N-Diallylamine derivatives according to claims 9 and 10, where  $R^3$  is COOH.
- 30 12. A process for the preparation of substituted N,N-diallylamine derivatives of the general formula III according to claims 9 to 11, which comprises carrying out a Michael addition between N,N-diallylamine derivatives of the general formula I

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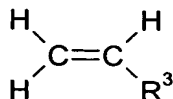


I

where R<sup>1</sup>, R<sup>2</sup>, independently of one another, are hydrogen or C<sub>1</sub>-C<sub>4</sub>-alkyl

and compounds of the general formula II

5



II

where R<sup>3</sup> is COOR<sup>4</sup>, CN, CHO, SO<sub>3</sub>H, PO(OH)<sub>2</sub> or CONR<sup>5</sup>R<sup>6</sup> and

R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup>, independently of one another, are hydrogen or C<sub>1</sub> to C<sub>18</sub>-alkyl.

- 10 13. A process according to claim 12, wherein no solvent is used.
14. Use of the polymers according to claim 8 for the preparation of cosmetic and pharmaceutical compositions.
- 15 15. Use of the polymers according to claim 8 for the preparation of fixatives and flocculants.
16. Use of the polymers according to claim 8 for the preparation of detergents and cleaners.
- 20 17. Use of the polymers according to claim 8 in polymer dispersions.